UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,845	07/31/2003	David D. Bohn	003797.00540	1952

28319 7590 08/23/2005

BANNER & WITCOFF LTD.,
ATTORNEYS FOR MICROSOFT
1001 G STREET , N.W.
ELEVENTH STREET
WASHINGTON, DC 20001-4597

EXAMINER	
AWAD, AMR A	

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/630,845	BOHN, DAVID D.	
	Examiner	Art Unit	
	Amr Awad	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 7-8, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US patent NO. 6,348,912) in view of Hedman (US patent NO. 6,496,180).

As to claim 1, Smith (figures 1 and 6-9) teaches an input device (mouse 10) for scrolling an image relative to a display screen, the input device comprising: a scroll wheel (22) rotatable in opposing first and second directions about an axis (col. 2, lines 2-17); and a scroll wheel locking element movable to a first position that prevents the rotation of the scroll wheel (col. 3, lines 5-9 and lines 36-47).

Smith does not expressly shows that the locking element prevents the rotation of the scroll wheel in the first direction and permits rotation of the scroll wheel in the second direction.

However, Hedman (figure 1) teaches a mouse (11) that includes a slider (15) movable in two opposing directions (abstract), and wherein the scrolling wheel (slider 15) is capable to move only in a single direction by allowing the selector switches to control the direction of the scrolling (col. 4, lines 5-20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Hedman, allowing the scrolling wheel to move only in a single direction, to be incorporated into the locking scrolling mechanism of Smith's device so as motivated by Hedman, to prevent the undesired scrolling of the image on the screen, and to provide a correct scrolling function for a user (col. 1, lines 30-33).

As to claim 2, as can be seen above, Hedman shows that the scrolling wheel (slider 15) is capable to move only in a single direction by allowing the selector switches to control the direction of the scrolling (col. 4, lines 5-20), which means that the scrolling can be only in the first direction or only to the second direction, which fairly reads on the claimed limitation of claim 2.

As to claim 3, Smith shows a wheel like switch (530 in figure 9) to lock the scrolling wheel 22, which fairly reads on the claimed limitations. Also Smith teaches a pin 524 (pin usually has wheel shape) to lock the scroll wheel 22 (col. 4, lines 1-4, which also fairly reads on the claimed limitation.

As to claim 4, by considering the pin 524 to be lockable wheel, then we can see that it is located on the same axis as the scrolling wheel 22.

As to claim 7, as can be seen above, both Smith and Hedman show a mouse to be used in the device.

As to independent claim 8, the claim is substantially similar to claim 1, and would be analyzed as discussed above with respect to claim 1.

As to independent claim 14, the claim is substantially similar to independent claim 1 except that claim 14 calls for having the housing with an

aperture to have the scroll wheel extending partially through the aperture as it is clear from the drawings (for example, figure 2 of Smith and figure 3 of Hedman), that the wheel penetrates the housing though an aperture.

As to claim 17, as can be seen above, both Smith and Hedman show a mouse to be used in the device.

3. Claims 5-6, 9-13, 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith and Hedman as applied to claim 1 above, and further in view of Sandage et al. (US patent NO. 2003/0201979).

As to claim 6, as can be seen above, Smith and Hedman teach all the limitation of claim 5 except the citation of having Solenoid coupled to the scroll wheel-locking element to move the scroll wheel-locking element between multiple positions.

However, Sandage (figures 3-4) teaches an input device that includes a control wheel (36), a lockable wheel (control wheel axle 38), and wherein the solenoid (40) coupled to the wheel by pins (42 and 44) in contacts with wheel-locking elements (nubs or knurls 50), to move the wheel-locking elements in multiple positions (paragraph NO. 0024).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sandage having Solenoid, to be incorporated to Smith's device so as motivated by Sandage, by using a flexibly structured solenoid pin, or a pair of Solenoids, to control the

wheel in only one directions or two directions (paragraph 21), and therefore, increase the flexibility of the device.

As to claim 9, Smith and Hedman do not teach that the unidirectional scroll wheel locking system includes a ratchet and Pawl.

However, Sandage shows a locking mechanism (figure 5) that includes a ratchet and Pawl (42 and 50) paragraph NO. 24).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sandage having hatchet and Pawl, to be incorporated to Smith's device so as motivated by Sandage, by using such structure, the wheel can be controlled in only one directions or two directions and therefore, increase the flexibility of the device.

As to claims 10-11, Sandage shows that the ratchet is a lockable wheel (axel 38), the claim further recites, a light source to be used to detect the movement of the scrolling wheels. Hedman (figure 3) shows a scrolling wheel (15) connecting to a light source (45) to detect the movement of the wheel (col. 2, line 60 to col. 3, line 5), and a plurality of openings (43).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Hedman, using a light sensor to detect the movement of the wheel, to be incorporated to Smith's device so as well known, detecting the movement using light source provide more accurate measurement of the movements.

As to claim 12, by considering the axle (38) in Sandage's device as a lockable wheel, then moving the scrolling wheel (36) causes the rotation of the lockable wheel (38).

As to claim 13, as can be seen in figures 4-5, Sandage shows that by having the pin 42 on the left side up, the wheel scrolls in one direction, and then by having the pin 42, the scroll wheel moves in the second direction (paragraph NO. 24).

As to claim 15, Smith and Hedman do not show that the scroll-wheel-locking element is activated in response to the end of a document.

However, Sandage shows that the locking of the wheel is activated when the user reaches either end of a document (paragraphs 32 and 34).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Sandage, having the locking mechanism activated at the end of the document, to be incorporated to Smith's device so as motivated by Sandage, to inform the user to the end of a document, without the need of the scroll bar on the side of the display (paragraph NO. 8), which will make the device user friendly, as well as increasing the size of the visual image.

As to claim 16, it is inherent that the device includes a microprocessor (for example, the flowchart in Smith's device is indicative of a microprocessor).

As to claim 18, Sandage shows the scrolling wheel (36) rotatable in two direction, and a scroll wheel locking (pins 42 & 44) positionable in first, second, and third distinct positions (for that, the first position is considered to lock the

wheel in first direction, and the second position is to lock the wheel in the second direction, and the third position is to free the wheel from the both directions) (paragraphs 24-25).

As to claims 5 and19, Sandage shows the lockable wheel (axle 38) having angularly spaced lockable members (sprocket 46 in figures 3-4) members and wherein the scroll wheel-locking lever (pin 42) is tangential to the lockable members (paragraph NO. 20).

As to claim 20, the first and the second surfaces are element 42 & 44 in figure 4 of Sandage, which fairly reads on the claimed limitations (paragraphs 20-21).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (571) 272-7764. The examiner can normally be reached on Monday through Fridary from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkwitz can be reached on (571)272-3638. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMR A. AWAD
PRIMARY EXAMINER

A. A.

Amr Awad
Primary Examiner
Art Unit 2675